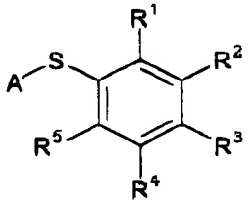
IN THE SPECIFICATION:

Please enter the specification amendments as follows.

Beginning on page 4, line 8, and ending on page 6, line 14:

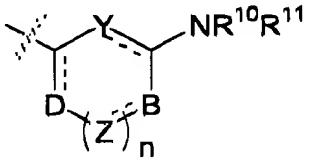
The present invention is directed to compounds of Formula I



Formula I

or pharmaceutically acceptable salts, optical isomers, or prodrugs thereof,

wherein R^1, R^2, R^3, R^4 and R^5 are each independently selected from the group consisting of hydrogen, halogen, alkyl, haloalkyl, alkoxy, cyano, nitro, cycloalkyl and carboxaldehyde, or a group of Formula II defined as



Formula II

subject to the proviso that one or more than one of R^1 or R^3 is a group of Formula II as defined above;

wherein D, B, Y and Z at each occurrence are independently selected from the group consisting of $-CR^6=$, $-CR^7R^8-$, C(O)-, -O-, $-SO_2-$, -S-, $-N=$, and $-NR^9-$;

n is an integer of zero to three;

R^6, R^7, R^8, and R^9, at each occurrence, are each independently selected from the group consisting of hydrogen, alkyl, carboxy, hydroxyalkyl, alkylaminocarbonylalkyl, dialkylaminocarbonylalkyl and carboxyalkyl; and

R^{10} and R^{11} are each independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkoxyalkyl, alkoxycarbonylalkyl, carboxyalkyl, hydroxyalkyl, heterocyclyl, heterocyclylalkyl and heterocyclylamino; or

R^{10} and R^{11} are taken together with N to form a three to seven membered unsubstituted heterocyclyl ring, or a three to seven membered substituted heterocyclyl ring, substituted with one or more than one substituent R^{13}, wherein R^{13}, at each occurrence is independently selected from the group consisting of alkyl, alkylene, alkoxy, alkoxyalkyl, cycloalkyl, aryl, heterocyclyl, heterocyclylalkyl, heterocyclylcarbonyl, heterocyclylalkylaminocarbonyl, hydroxy, hydroxyalkyl, hydroxyalkoxyalkyl, carboxy, carboxyalkyl, carboxycarbonyl, carboxaldehyde, alkoxycarbonyl, arylalkoxycarbonyl, aminoalkyl, aminoalkanoyl, aminocarbonyl, carboxamido, alkoxycarbonylalkyl, carboxamidoalkyl, cyano, tetrazolyl, alkanoyl, hydroxyalkanoyl, alkanoyloxy, alkanoylamino, alkanoyloxyalkyl, alkanoylaminoalkyl, sulfonate, alkylsulfonyl, alkylsulfonylaminocarbonyl, arylsulfonylaminocarbonyl and heterocyclylsulfonylaminocarbonyl;

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wherein A is an unsubstituted aryl group, an unsubstituted heterocyclyl group, a substituted aryl group, or a substituted heterocyclyl group, substituted with one or more than one substituent R^{12}, wherein R^{12}, at each occurrence, is independently selected from the group consisting of halogen, alkyl, aryl, haloalkyl, hydroxy, alkoxy, alkoxyalkyl, alkoxycarbonyl, alkoxyalkoxy, hydroxyalkyl, aminoalkyl, aminocarbonyl, alkyl(alkoxycarbonylalkyl) aminoalkyl, heterocyclyl, heterocyclylalkyl, carboxaldehyde, carboxaldehyde hydrazone, carboxamide, alkoxycarbonylalkyl, carboxy, carboxyalkyl,

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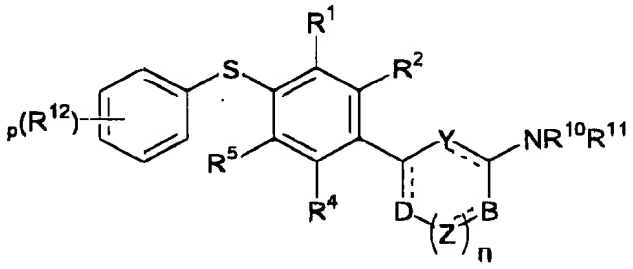
carboxyalkoxy, carboxythioalkoxy, carboxycycloalkoxy, thioalkoxy, carboxyalkylamino, trans-cinnamyl, hydroxyalkylaminocarbonyl, cyano, amino, heterocyclylalkylamino, and heterocyclylalkylaminocarbonyl; and

wherein R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10},R^{11}, R^{12} and R^{13} are unsubstituted or substituted with at least one electron donating or electron withdrawing group.

Beginning on page 6, line 18 and ending on page 8, line 16:

The present invention is also directed to compounds of Formula III



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Formula III

wherein R^1, R^2, R^3, R^4 and R^5 are each independently selected from the group consisting of hydrogen, halogen, alkyl, haloalkyl, alkoxy, cyano, nitro, cycloalkyl and carboxaldehyde;

D, B, Y and Z are as defined above for Formula I;

R^{12}, at each occurrence, is independently selected from the group consisting of halogen, alkyl, haloalkyl, alkoxy, carboxyalkoxy, carboxyalkyl and heterocyclyl;

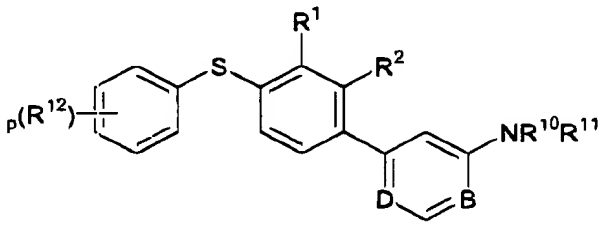
p is an integer of zero to five; and

wherein R^1, R^2, R^4, R^5, R^{10}, R^{11} and R^{12} are unsubstituted or substituted with at least one electron donating group or electron withdrawing group.

Presently most preferred, but not required, compounds of Formula III have p as one; R^4 and R^5 as hydrogen; R^{12} as halogen, alkyl, carboxyalkoxy, carboxyalkyl or heterocyclyl;

and R^{10} and R^{11} are taken together with N to form a three to seven membered unsubstituted heterocyclyl ring, or a three to seven membered substituted heterocyclyl ring; said ring being piperidine, piperazine, morpholine, pyrrolidine or azetidine.

Presently most preferred, but not required, compounds are of Formula IV



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Formula IV

wherein D and B are each independently selected from the group consisting of -N= and -CR^6=;

R^1 and R^2 are each independently selected from the group consisting of hydrogen, halogen and haloalkyl;

R^{10} and R^{11} are as defined above for Formula I;

R^{12}, at each occurrence, is independently selected from the group consisting of halogen, alkyl, haloalkyl, alkoxy, carboxyalkoxy, carboxyalkyl and heterocyclyl;

p is an integer of zero to five; and

wherein R^1, R^2, R^{10}, R^{11}, and R^{12} are unsubstituted or substituted with at least one electron donating group or electron withdrawing group.

Presently most preferred, but not required, compounds are of Formula IV, where p can be one; R^{12} can be halogen, alkyl, alkoxy, carboxyalkoxy, carboxyalkyl or heterocyclyl; and R^{10} and R^{11} can be taken together with N to form a three to seven membered heterocyclyl ring; said ring being piperidine, piperazine, morpholine, pyrrolidine or azetidine.

Beginning on page 28, line 10, and ending on page 31, line 10:

Scheme 1 describes compounds of Formula I, which contain an oxazole ring (n=0, Y=N, B=O, D=C). In Scheme 1, and likewise in Schemes 2 and 4, the substituent X is a leaving group. In Scheme 1, Aryl methyl ketone **1**, with an appropriate substitution (R^{1-2} and R^{4-5}), and a leaving group X, reacts with an aryl thiol to give a biaryl sulfide **2**. Biarylsulfide **2** can be converted into an alpha-bromomethyl ketone **3** using a variety of reagents including Bu_4NBr_3. Condensation of **3** with a urea gives a desired oxazole compound **4**.

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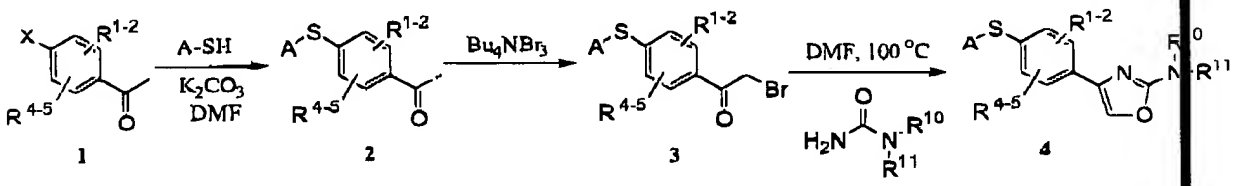
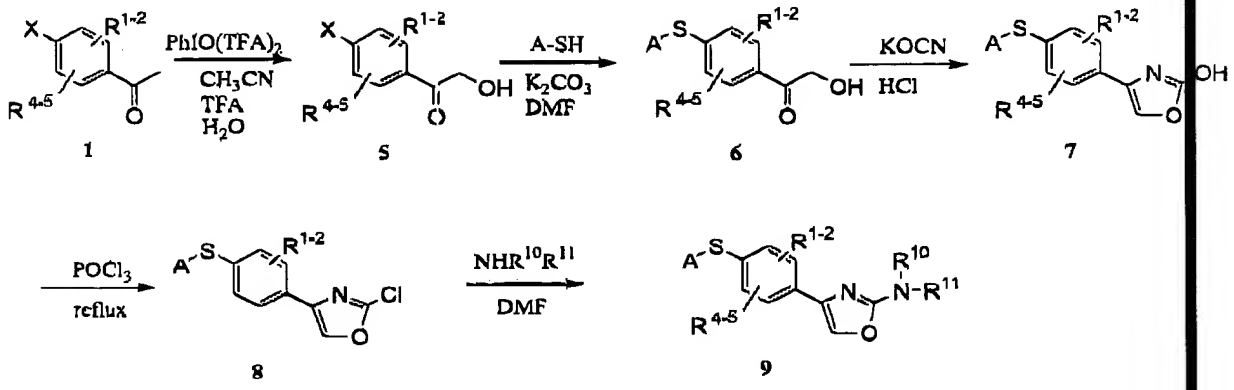
Scheme 1



Another method of preparing compounds of Formula I containing an oxazole ring (n=0, Y=N, B=O, D=C) is illustrated in Scheme 2. In Scheme 2, an aryl methyl ketone **1** is converted into an alpha-hydroxymethyl ketone **5**, which then can be reacted with an aryl thiol to give a biaryl sulfide **6**. Acid-catalyzed condensation of **6** with KOCN affords a 2-hydroxy oxazole **7**, which can be converted into a 2-chloro-oxazole **8** using $POCl_3$. Displacement of the chloride of **8** with an amine gives a desired 2-amino-oxazole **9**.

Scheme 2



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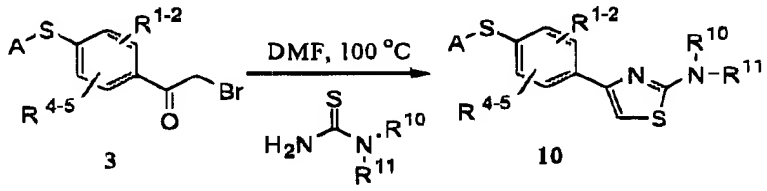
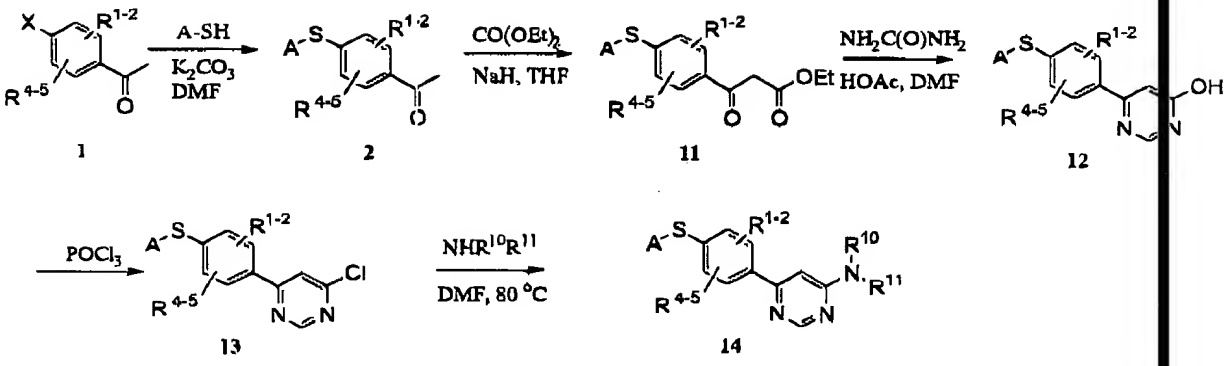
Scheme 3 describes the synthesis of a class of compounds of Formula I containing thioazole ring (n=0, Y=N, B=S, D=C). In Scheme 3, biaryl sulfide alpha-bromomethy ketone **3** can be prepared following the procedure outline in Scheme 1. Condensation of **3** with a properly substituted thiourea gives a desired 2-aminothioazole **10**.

Scheme 3



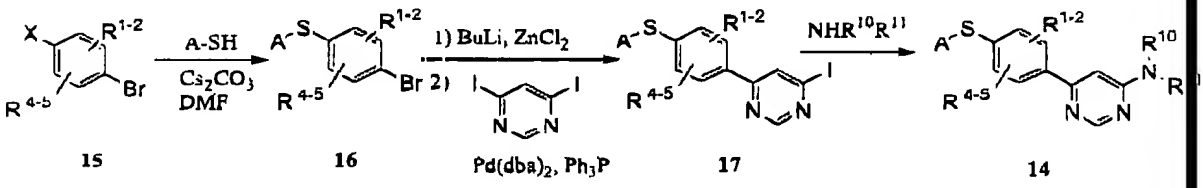
Another class of compounds of Formula I are compounds containing a pyrimidine ring, for example 4,6-disubstituted pyrimidines (n=1, Y=C, B=N, Z=C, D=N). Scheme 4 describes one procedure for the preparation of this class of compounds. Reaction of a biaryl sulfide methyl ketone **2** with diethyl carbonate under base-catalysis leads to a beta-ketoester **11**. Condensation of **11** with formamidine gives a 4-hydroxy pyrimidine **12**, which can be converted into a 4-chloropyrimidine **13**. Displacement of the chloride of **13** by an amine gives a desired 4-amino-pyrimidine **14**.

Scheme 4



An alternative synthesis of 4,6-disubstituted pyrimidines is illustrated in Scheme 5. In Scheme 5, nucleophilic substitution of an aryl fluoride **15** with an aryl thio under base-catalysis gives a biaryl sulfide **16**. Transmetallation of **16** with n-BuLi/$ZnCl_2$, followed by Pd-catalyzed cross-coupling with a 4,6-diiodopyrimidine leads to an iodopyrimidine **17**. Reaction of **17** with a selected amine gives a desired 4-aminopyrimidine **14**.

Scheme 5



Yet another class of compounds of Formula I are compounds containing a pyridine ring, for example 2,4-disubstituted pyridines (n=1, Y=C, B=N, Z=C, D=C). Scheme 6 describes one procedure for the preparation of this class of compounds. In Scheme 6, Pd catalyzed cross-coupling of a properly substituted 1-bromo-4-fluoro-benzene **15** and 4-pyridine boronic acid gives compound **18**. Oxidation of **18** with MCPBA leads to a pyridinium oxide **19**. Displacement of the fluoride of **19** with an aryl thio affords biarylsulfide **20**. Treatment

of **20** with $POCl_3$, leads to 2-chloropyridine **21**. Finally, reaction of **21** with a selected amine gives a desired 2-aminopyridine **22**.

Scheme 6